

## **CLAIM AMENDMENTS:**

1. (original) A regulator for increasing the efficiency of an engine, the regulator being locatable in or adjacent to an engine manifold and comprising a propeller connected to a power supply for driving the propeller, and a means for mounting the propeller in the manifold, the propeller having a longitudinal pin defining a rotation axis and at least one blade attached to the pin by means of an elongated blade root which substantially follows the longitudinal axis of the pin.

2. (currently amended) A regulator ~~as claimed in~~ according to claim 1, wherein the blade root follows the longitudinal axis of the pin in an at least partial helical manner.

3. (currently amended) A regulator ~~as claimed in either~~ according to claim 1 ~~or 2~~, wherein the length of the blade root is greater than the distance between the blade tip ~~to~~ and the pin.

Claim 4 (canceled).

5. (currently amended) A regulator ~~as claimed in any preceding~~ according to claim 1, ~~wherein the regulator further comprises a~~ comprising at least one perforated element capable of allowing the passage of fluid material therethrough, and a means for mounting the perforated element in the manifold.

Claim 6 (canceled).

7. (currently amended) A regulator ~~as claimed in any preceding~~ according to claim 1, wherein the blade has a substantially smoothly curving blade edge.

8. (currently amended) A regulator ~~as claimed in any of claims 1 to 6~~ according to claim 1, wherein the blade has a shape substantially of ~~a semi-circle~~, an

ellipse, a part ellipse, a teardrop, a half-teardrop, a bell curve, or a half-bell curve, ~~a rectangle, a square, a triangle or derivatives thereof.~~

9. (currently amended) A regulator ~~as claimed in any preceding~~ according to claim 1, wherein the blade is relatively wider towards one end of the blade root.

10. (currently amended) A regulator ~~as claimed in any preceding claims~~ according to claim 1, wherein the propeller is effective to pull fluid material from a region upstream of the propeller to a region downstream of the propeller and cause turbulent flow in the region downstream thereof.

Claims 11-25 (canceled).

26. (currently amended) A regulator ~~as claimed in any of claims 1 to 24~~ according to claim 1, wherein the propeller is mounted such that the axis of the propeller is between 0.5° to 60° with respect of the longitudinal axis of the manifold.

Claims 27-45 (canceled).

46. (new) A regulator according to claim 5, wherein the propeller is mounted beneath the perforated element.

47. (new) A regulator for increasing the efficiency of an engine, the regulator being locatable in or adjacent to an engine manifold and comprising at least one perforated element capable of allowing a passage of fluid material therethrough, means for mounting the perforated element in the manifold, a propeller connected to a power supply for driving the propeller, and means for mounting the propeller in the manifold beneath the perforated element, the propeller having a longitudinal pin defining a rotational axis and at least one blade attached to the pin by an elongated blade root which substantially follows

the longitudinal axis of the pin in at least partial helical manner, the blade of the propeller being relatively wider towards one end of the blade root, the length of the blade root being greater than a distance between the pin and a tip of the blade.

48. (new) A regulator according to claim 47, wherein the blade has a substantially smoothly curving blade edge.

49. (new) A regulator according to claim 48, wherein the propeller is mounted so that the axis of the propeller is between  $0.5^{\circ}$  to  $60^{\circ}$  with respect to a longitudinal axis of the manifold.